

Material Safety Data Sheet

Section 1. Product Identification and Use

Product Name - Trade Name **999-069 CATALYST**

Supplier - Manufacturer **Chemcraft International Inc.,**
155 Rose Glen Road North
P.O. Box 458
Port Hope, ON.
Canada L1A 3Z3

Telephone (905) 885-6388 Fax (905) 885-5097

In case of Emergency (905) 885-6388, (800) 263-7951

For Transport Emergency or After Hours

CANUTEC (613) 996-6666

Code 999-069

Synonym CATALYST

Chemical Name Not applicable.

Chemical Family Polymer.

Chemical Formula Not applicable.

Material Uses Coatings: Hardener for resins.

Product Identification Number (PIN) NOT REGULATED

Section 2. Hazardous Ingredients

Name	CAS #	% by Weight	<u>Exposure Limits</u>	
			LC ₅₀ /LD ₅₀	TLV/PEL
Polyfunctional aziridine	64265-57-2	60-100	ORAL (LD50): Acute: 3038 mg/kg [Rat].	Not available.

Trace impurities and additional material names not listed above may appear in other sections of this MSDS. These materials may be listed for toxicological concerns, local compliance, or other reasons.

Section 3. Physical Data

Physical State and Appearance Liquid. (Viscous liquid.)

Color Amber. (Light.) Odor Amine like. (Slight.) Taste Not available.

Molecular Weight Not applicable.

pH (1% soln/water) Not available.

Boiling Point Not available.

Melting Point Not available.

Critical Temperature Not available.

Specific Gravity 1.075 (Water = 1)

Vapor Pressure Not available.

Vapor Density Greater than air.

Volatility Not available.

Odor Threshold Not available.

Water/Oil Dist. Coeff. Not available.

Ionicity (in Water) Not available.

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Dispersion Properties	See solubility in water.
Solubility	Easily soluble in cold water, hot water.

Section 4. Fire and Explosion Hazard

The Product is:	May be combustible at high temperature.
Fire Hazards in Presence of Various Substances	Not available.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	Not available.
Flash Points	The lowest known value is CLOSED CUP: Higher than 93.3°C (200°F).. (Pensky-Martens.). (1-Aziridinepropanoic acid, 2-methyl-, 2-ethyl-2-((3-(2-methyl-1-aziridinyl)-1-oxopropoxy)methyl)-1,3-propanediyl ester)
Flammable Limits	Not available.
Auto-Ignition Temperature	Not available.
Products of Combustion	These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Special Remarks on Explosion Hazards	Not available.

Section 5. Reactivity Data

Stability	The product is stable.
Decomposition products	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Extremely reactive or incompatible with acids. Highly reactive with oxidizing agents.
Corrosivity	Not available.
Special Remarks on Reactivity	Hazardous polymerization may occur if mixed with acidic materials. Incompatible with acidic materials, anhydrides and strong oxidizers. (1-Aziridinepropanoic acid, 2-methyl-, 2-ethyl-2-((3-(2-methyl-1-aziridinyl)-1-oxopropoxy)methyl)-1,3-propanediyl ester)
Special Remarks on Corrosivity	Not available.

Section 6. Toxicological Properties

Routes of Entry	Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 3038 mg/kg (Rat) (Calculated value for the mixture).
Effects of Acute Exposure	Very hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant), of ingestion, of inhalation. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified 4 (Probably not for human.) by IARC, 4 (No evidence.) by NTP, None. by OSHA [1-Aziridinepropanoic acid, 2-methyl-, 2-ethyl-2-((3-(2-methyl-1-aziridinyl)-1-oxopropoxy)methyl)-1,3-propanediyl ester]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.
Special Remarks on Toxicity to Animals	Not available.

Special Remarks on Chronic Effects on Humans	Carcinogenicity: No components at detectable levels are listed as carcinogens by NTP, IARC, or OSHA. However, because of the positive mutagenic test and carcinogenic effects of lower molecular weight aziridine compounds, this product should be handled with due care. Mutagenic activity: CX-100 was tested for potential mutagenic activity in microbial assays using the reverse mutation technique as described by Ames. A dose-related increased reversion frequency over the spontaneous rate was obtained, and a value of 0.18 revertants per microgram was calculated. (1-Aziridinepropanoic acid, 2-methyl-, 2-ethyl-2-((3-(2-methyl-1-aziridinyl)-1-oxopropoxy)methyl)-1,3-propanediyl ester)
Special Remarks on Other Toxic Effects on Humans	Not a primary skin irritant but severely irritating to abraded skin. Eye contact: corrosive effect observed, lasting beyond two weeks. (1-Aziridinepropanoic acid, 2-methyl-, 2-ethyl-2-((3-(2-methyl-1-aziridinyl)-1-oxopropoxy)methyl)-1,3-propanediyl ester)
Exposure Limits	Not available.

Section 7. Preventive Measures

Personal Protection	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Small Spill	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Precautions	Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.
TDG Classification	Not controlled under TDG (Canada).
PIN	NOT REGULATED PG: Not applicable.
Special Provisions for Transport	Not applicable.
Federal and State Regulations	California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Crosslinker CX-100 TSCA 8(b) inventory: Crosslinker CX-100
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Other Classifications	WHMIS (Canada) CLASS D-2A: Material causing other toxic effects (VERY TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).
	HCS (U.S.A.) Class: Irritating substance. CLASS: Sensitizing substance.

Hazardous Material Information System (U.S.A.)	Health Hazard	2
	Fire Hazard	1
	Reactivity	0
	Personal Protection	h

National Fire Protection Association (U.S.A.)	Health	2
	Fire Hazard	1
	Reactivity	0

Specific Hazard

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Section 8. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Hazardous Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Hazardous Inhalation	Not available.
Ingestion	Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Hazardous Ingestion	Not available.

Section 9. Preparation Information

References	-Manufacturers Material Safety Data Sheets.
Other Special Considerations	Not available.
Related Information	This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by CPR.
Preparation Information	Validated by Carroll Kelly on 12/11/2001. Verified by Carroll Kelly. Printed 9/18/2002.
Information Contact	Prepared by the Health, Safety and Environment Department, Chemcraft International Inc., P.O. Box 458, 155, Rose Glen Road North, Port Hope, ON. Canada. Phone: 905 885-6388 Fax: 905 885-5097

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.